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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/037,501
Filing Date: January 04, 2002
Appellant(s): EMERSON ET AL.

Philip S. Lyren
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 2/20/2009 appealing from the Office action mailed 7/11/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5790895	Krontz et al.	08-1998
2002/0078404	Vachon et al.	06-2002
6963817	Ito et al.	11-2005

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1,9,13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

Claims 1-9,11-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vachon et al. U.S. Patent Publication # 2002/0078404 (hereinafter Vachon) in view of Ito et al. U.S. Patent # 6,963,817 (hereinafter Ito)

Claims 1-2,4,8,9,11-14,17,-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krantz et al. U.S. Patent # 5,790,895 (hereinafter Krantz) in view of Ito et al. U.S. Patent # 6,963,817 (hereinafter Ito)

Claims 3,5-7,15-16,21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krantz et al. U.S. Patent # 5,790,895 (hereinafter Krantz) Ito et al. U.S. Patent # 6,963,817 (hereinafter Ito) further in view of Vachon et al. U.S. Patent Publication # 2002/0078404 (hereinafter Vachon)

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1,9,13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per claims 1,9,13, it states “..to redirect without arbitration the data received from the OS to the remote user”. Nowhere in the specification does it state “to redirect without arbitration”. Therefore the claim language is not supported by the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9,11-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vachon et al. U.S. Patent Publication # 2002/0078404 (hereinafter Vachon) in view of Ito et al. U.S. Patent # 6,963,817 (hereinafter Ito)

As per claim 1, Vachon teaches a remote management controller, comprising:

-an external communication interface (Fig. 1 element 106) adapted to receive data from a remote user (Fig. 5 element “target computer”) (Paragraph 33);

Vachon teaches serial bus such as IEEE 1394 serial bus adapted to receive data from target computer

-an input/output processor (IOP) adapted to: receive data from external communication interface (Paragraph 33); and

Vachon teaches host computer receives data from the serial bus of the content of the target computer.

-transmit data corresponding to the data received from the external communication interface to an operating system (OS) of a managed server (Paragraph 36)(Paragraph 38); and

Vachon teaches sending the data via serial bus interface the data received from the target computer to the host computer and the debugger run by the operating system.

Vachon is silent in teaching a virtual communication device (VCD) interface adapted to: intercept data received from the OS, the VCD interface comprising a pre-defined standard communication interface, the data received from the OS being intended for specific communication interface, and to redirect without arbitration the data received from the OS to the remote user via the external communication interface instead of redirecting the data received from the OS to the specific communication interface

Ito teaches a virtual communication device (VCD) (microprocessor) interface adapted to: intercept data received from the OS (column 12 lines 25-28), the VCD interface comprising a pre-defined standard communication interface, the data received from the OS being intended for specific communication interface (column 12 lines 62-67, lines 1-5), and to redirect without arbitration the data received from the OS to the remote user via the external communication interface instead of redirecting the data received from the OS to the specific communication interface (column 12 lines 6-12, lines 25-32)(Fig. 7)(Fig. 8)

Ito teaches microprocessor (virtual communication device) intercepting data from the operating system, the data may be sent to UART3 (specific communication interface), and is redirected to the remote computer via modem (external communication interface).

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Vachon's teaching to come up with redirecting data to the remote user through modem and UART2 (external communication) instead of redirecting data to specific communication interface (i.e. UART3). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45)

As per claim 2, Vachon and Ito teaches the remote server management controller of claim 1, but Ito further teaches wherein the specific communication interface is a UART interface of the managed server (Fig. 3 element "UART interface")(column 12 lines 25-32)

As per claim 3, Vachon and Ito teaches the remote server management controller of claim 1, but Vachon further teaches wherein the specific communication interface is a USB host controller of the managed server (Paragraph 26)

As per claim 4, Vachon and Ito teaches the remote server management controller of claim 1, but Vachon further teaches wherein data received from the user over the external communication interface is transmitted to the OS of the managed server (Paragraph 36)(Paragraph 38). Vachon fails to teach transmitting data via a UART interface. Ito teaches transmitting data over UART interface (column 12 lines 25-

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32). Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Vachon's teaching to come up with transmitting data over UART interface. The motivation for doing so that UART will condition the signal to be accepted by the microprocessor i.e. the virtual communication device (column 11 lines 65-66).

As per claim 5, Vachon and Ito teaches the remote server management controller of claim 1, but Vachon further teaches, wherein data received from the user over the external communication interface is transmitted to the OS of the managed server (Paragraph 36)(Paragraph 38) via a USB interface (Paragraph 26).

As per claim 6, Vachon and Ito teaches the remote server management controller of claim 1, but Vachon further teaches, the specific communication interface is a 1394 interface of the managed server (Paragraph 33)(Paragraph 36).

As per claim 7, Vachon and Ito teaches the remote server management controller of claim 1, but Vachon further teaches, wherein data received from the user over the external communication interface is transmitted to the OS of the managed server via a 1394 interface (Paragraph 33)(Paragraph 36)

As per claim 8, Vachon teaches the remote server management controller of claim 1, but Ito further teaches wherein the external communication interface is an Ethernet interface (Fig. 7 and 8 element 316) (column 12 lines 25-32).

As per claim 9, Vachon teaches a remote server management controller, comprising:

-an input/output processor (IOP) adapted to monitor interrupt data transmitted from a super I/O (SIO) to a southbridge , to alter the interrupt data transmitted from the SIO based on input received from an external user via an external communication interface (Paragraph 33) and to transmit the altered interrupt data to a managed server (Paragraph 36)(Paragraph 38); and

Vachon fails to teach a virtual communication device (VCD) that comprises a predefined standard communication interface, the VCD being adapted to: intercept responsive data intended to be transmitted to the SIO in response to the altered interrupt data; the responsive data being in a format that is not compatible with the first communication protocol; and prevent the responsive data from reaching the SIO; format the responsive data for transmission; and redirect without arbitration the formatted data to the external communication interface.

Ito teaches a virtual communication device (VCD) (Fig. 7 element 306 or Fig. 8 element 322) that comprises a predefined standard communication interface (UART interface), the VCD being adapted to: intercept responsive data intended to be transmitted to the SIO in response to the altered interrupt data (column 12 lines 62-67, lines 1-5); the responsive data being in a format that is not compatible with the first communication protocol; and prevent the responsive data from reaching the SIO; format the responsive data for transmission; and redirect without arbitration the formatted data to the external communication interface (column 12 lines 6-12, lines 25-32)(Fig. 7)(Fig. 8)

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Vachon's teaching to come up with redirecting data to the remote user through modem instead of redirecting data to specific communication interface (i.e. UART). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45)

As per claim 11, Vachon teaches the remote server management controller of claim 9 wherein the input received from the external user is adapted to emulate an interrupt generated by a device in the managed server (Paragraph 38)(Paragraph 39.

As per claim 12, Vachon teaches the remote server management controller of claim 9, but Ito further teaches wherein the external communication interface is an Ethernet interface (Fig. 7 element 316, Fig. 8 element 332)

As per claim 13, Vachon teaches a method of remotely retrieving data from an operating system (OS), the method comprising the acts of:

- receiving a request for OS information from a remote user (Paragraph 33)(Paragraph 35)(Paragraph 36);

- transmitting the request for OS information to the OS via a virtual communication device (VCD) comprising a pre-defined standard communication interface (Paragraph 36)(Paragraph 38); and

Vachon fails to teach receiving via the VCD interface data responsive to the act of transmitting the request to the OS, the data being intended for a specific communication interface; formatting the responsive data for transmission and;

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redirecting without arbitration the formatted data to the external communication interface.

Ito teaches transmitting the request for OS information to the OS via a virtual communication device (VCD) comprising a pre-defined standard communication interface (column 10 lines 43-47, lines 64-67); receiving via the VCD interface data responsive to the act of transmitting the request to the OS, the data being intended for a specific communication interface (column 12 lines 62-67, lines 1-5), formatting the responsive data for transmission and; redirecting without arbitration the formatted data to the external communication interface (column 12 lines 6-12, lines 25-32)(Fig. 7)(Fig. 8)

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Vachon's teaching to come up with redirecting data to the remote user through modem instead of redirecting data to specific communication interface (i.e. UART). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45)

As per claim 14, Vachon and Ito teaches the method of claim 13, but Ito further teaches wherein the specific communication interface is a UART interface (column 12 lines 25-32)(Fig. 7,8).

As per claim 15, Vachon and Ito teaches the method of claim 13, but Vachon further teaches wherein the specific communication interface is a USB interface (Paragraph 27).

As per claim 16, Vachon and Ito teaches the method of claim 13, but Vachon further teaches wherein the specific communication interface is a 1394 interface (Paragraph 33)(Paragraph 36)

As per claim 17, Vachon and Ito teaches the method of claim 13, but Ito further teaches further comprising the act of enabling an Ethernet interface to receive the request for OS information (column 12 lines 25-32)

As per claim 18, Vachon and Ito teaches the method of claim 13, but Vachon further comprising the act of initiating an out-of-band management communication session (Paragraph 36)(Paragraph 38)(Paragraph 39).

As per claim 19, Vachon and Ito teaches the method of claim 13, but Vachon further comprising the act of enabling a VCD to transmit the request for OS information to the OS (column 10 lines 43-47, lines 64-67);

As per claim 20, Vachon and Ito teaches the method of claim 13, but Vachon wherein the recited acts are performed in the recited order (Paragraph 38)(Paragraph 39)

As per claim 21, Vachon and Ito teaches the remote server management controller of claim 1, but Vachon further teaches pre-defined communication interface comprises a USB interface (Paragraph 26)

As per claim 22, Vachon and Ito teaches the remote server management controller of claim 9, but Vachon further teaches, pre-defined communication interface comprises a USB interface (Paragraph 26)

As per claim 23, Vachon and Ito teaches the remote server management controller of claim 13, but Vachon further teaches pre-defined communication interface comprises a comprises a USB interface (Paragraph 26).

Claims 1-2,4,8,9,11-14,17,-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krantz et al. U.S. Patent # 5,790,895 (hereinafter Krantz) in view of Ito et al. U.S. Patent # 6,963,817 (hereinafter Ito)

As per claim 1, Krantz teaches a remote server management controller (Fig. 2 element "Integrated Remote Console"), comprising:

- an external communication interface (Fig. 1A element 149) adapted to receive data from a remote user (column 9 lines 52-56);

The reference teaches the modem (external communication interface) receives serial data from remote computer and communicates the serial data to the UART.

- an input/output processor (IOP) adapted to:
 - receive data from external communication interface (column 9 lines 52-56)(column 10 lines 46-64); and

The reference teaches the input/output processor (IOP) receives data from the modem (external communication interface).

- transmit data corresponding to the data received from the external communication interface to an operating system (OS) of a managed server (column 10 lines 55-67)(column 11 lines 1-9, lines 26-45)(column 12 lines 17-36,54-64); and

The reference teaches sending the resource data to the operating system of the server and the Virtual communication port of the device intercepts the data. The data is

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sent to the remote computer (remote user) via the modem (external communication port) to the operating system.

-a virtual communication device (VCD) (Fig. 2 element 200) interface adapted to (column 11 lines 40-44):

-intercept data received from the OS, the VCD interface comprising a pre-defined standard communication interface, the data received from the OS being intended for specific communication interface (column 10 lines 55-67)(column 11 lines 1-9, lines 26-45), and to redirect the data received from the OS to the remote user via the external communication interface instead of redirecting the data received from the OS to the specific communication interface (column 10 lines 55-67)(column 11 lines 1-9, lines 26-45)(column 12 lines 17-36) (column 12 lines 49-67);

The reference teaches sending the resource data to the operating system of the server and the Virtual communication port of the device intercepts the data. The data is directly received by the operating system without the arbitrator and the data is directly to the remote computer (remote user) from the operating system via the modem (external communication port). The reference also teaches the virtual communication device comprises pre-defined standard communication interface as COM1 through COM4 (column 10 lines 55-67)(column 11 lines 1-9, lines 26-31).

Krontz does not explicitly show to redirect without arbitration the data received from the OS to the remote user via the external communication interface instead of redirecting the data received from the OS to the specific communication interface.

Ito teaches a virtual communication device (VCD) (microprocessor) interface adapted to: intercept data received from the OS (column 12 lines 25-28), the VCD interface comprising a pre-defined standard communication interface, the data received from the OS being intended for specific communication interface (column 12 lines 62-67, lines 1-5), and to redirect **without arbitration** the data received from the OS to the remote user via the external communication interface instead of redirecting the data received from the OS to the specific communication interface (column 12 lines 6-12, lines 25-32)(Fig. 7)(Fig. 8)

Ito teaches microprocessor (virtual communication device) intercepting data from the operating system, the data may be sent to UART3 (specific communication interface), and is redirected to the remote computer via modem (external communication interface).

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Krantz's teaching to come up with redirecting data to the remote user through modem and UART2 (external communication) instead of redirecting data to specific communication interface (i.e. UART3). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45).

As per claim 2, Krantz and Ito teaches the remote server management controller of claim 1, but Krantz further teaches wherein the specific communication interface is a UART interface of the managed server (column 10 lines 44-64).

As per claim 4, Krantz and Ito teaches the remote server management controller of claim 1, but Krantz further teaches wherein data received from the user over the external communication interface is transmitted to the OS of the managed server via a UART interface. (Column 10 lines 47-64)

As per claim 8, Krantz and Ito teaches the remote server management controller of claim 1, but Krantz further teaches wherein the external communication interface is an Ethernet interface. (column 9 lines 49-56) (column 10 lines 44-47) (Fig. 1a element 149)(Column 11 lines 52-59)

The reference teaches communication takes place using a modem, which also works, as an Ethernet interface.

As per claim 9, Krantz teaches a remote server management controller, comprising:

- an input/output processor (IOP) adapted to monitor interrupt data transmitted from a super I/O (SIO) to a southbridge (column 9 lines 25-34), to alter the interrupt data transmitted from the SIO based on input received from an external user via an external communication interface (column 12 lines 17-36, lines 54-64) and to transmit the altered interrupt data to a managed server (column 10 lines 47-64)(column 9 lines 25-56); and

- a virtual communication device (VCD) that comprises a predefined standard communication interface (column 10 lines 55-67)(column 11 lines 1-9, lines 26-31), the VCD being adapted to:

- intercept responsive data intended to be transmitted to the SIO in response to the altered interrupt data (column 10 lines 55-67)(column 11 lines 1-9, lines 26-

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45)(column 12 lines 17-36), the responsive data being in a format that is not compatible with the first communication protocol (column 12 lines 54-67); and

- prevent the responsive data from reaching the SIO (column 10 lines 26-43);

The reference teaches the virtual communication port (VCD) to intercept the accesses (data) and prevents it from reaching the SIO.

- format the responsive data for transmission (column 12 lines 54-63)(column 10 lines 47-64); and

The reference teaches remote computer senses that connection in regards to data has not been established and retransmits and redirects it again through the protocols (format the data) therefore gobbling of data changed therefore the data has been transmitted.

- redirect the formatted data to the external communication interface (column 12 lines 49-67).

The reference teaches redirect the data to the operating system and received by the operating system without the arbitrator and the data is formatted because the data in the packet has went through the analysis directly to the remote computer (remote user) from the operating system via the modem (external communication port).

It teaches a virtual communication device (VCD) (Fig. 7 element 306 or Fig. 8 element 322) that comprises a predefined standard communication interface (UART interface), the VCD being adapted to: intercept responsive data intended to be transmitted to the SIO in response to the altered interrupt data (column 12 lines 62-67, lines 1-5); the responsive data being in a format that is not compatible with the first

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communication protocol; and prevent the responsive data from reaching the SIO; format the responsive data for transmission; and redirect **without arbitration** the formatted data to the external communication interface (column 12 lines 6-12, lines 25-32)(Fig. 7)(Fig. 8)

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Vachon's teaching to come up with redirecting data to the remote user through modem instead of redirecting data to specific communication interface (i.e. UART). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45)

As per claim 11, Krantz and Ito teaches the remote server management controller of claim 9, but Krantz further teaches wherein the input received from the external user is adapted to emulate an interrupt generated by a device in the managed server (column 10 lines 24-46).

As per claim 12, Krantz and Ito teaches the remote server management controller of claim 9, but Krantz further teaches wherein the external communication interface is an Ethernet interface (column 9 lines 49-56) (column 10 lines 44-47) (Fig. 1a element 149)(Column 11 lines 52-59) The reference teaches communication takes place using a modem which also works as an Ethernet interface.

As per claim 13, Krantz teaches a method of remotely retrieving data from an operating system (OS), the method comprising the acts of:

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- receiving a request for OS information from a remote user (column 12 lines 17-36, lines 54-64);

- transmitting the request for OS information to the OS via a virtual communication device (VCD) comprising a pre-defined standard communication interface (column 10 lines 55-67)(column 11 lines 1-9, lines 26-45)(column 12 lines 54-64); and

The reference teaches sending the resource data to the operating system of the server and the Virtual communication port of the device intercepts the data. The data is sent to the remote computer (remote user) via the modem (external communication port) to the operating system.

- receiving via the VCD interface data responsive to the act of transmitting the request to the OS, the data being intended for a specific communication interface (column 10 lines 55-67)(column 11 lines 1-9, lines 26-45)(column 12 lines 17-36)(column 12 lines 54-67);

- formatting the responsive data for transmission (column 12 lines 54-63); and

The reference teaches remote computer senses that connection in regards to data has not been established and retransmits and redirects it again through the protocols (format the data) therefore gobbling of data changed therefore the data has been transmitted.

- redirecting the formatted data to the external communication interface (column 12 lines 49-67).

The reference teaches redirect the data to the operating system and received by the operating system without the arbitrator and the data is formatted because the data in the packet has went through the analysis directly to the remote computer (remote user) from the operating system via the modem (external communication port).

Ito teaches transmitting the request for OS information to the OS via a virtual communication device (VCD) comprising a pre-defined standard communication interface (column 10 lines 43-47, lines 64-67); receiving via the VCD interface data responsive to the act of transmitting the request to the OS, the data being intended for a specific communication interface (column 12 lines 62-67, lines 1-5), formatting the responsive data for transmission and; redirecting without arbitration the formatted data to the external communication interface (column 12 lines 6-12, lines 25-32)(Fig. 7)(Fig. 8)

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Vachon's teaching to come up with redirecting data to the remote user through modem instead of redirecting data to specific communication interface (i.e. UART). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45)

As per claim 14, Krantz and Ito teaches the method of claim 13, but Krantz further teaches wherein the specific communication interface is a UART interface (column 10 lines 44-64).

As per claim 17, Krantz and Ito teaches the method of claim 13, but Krantz further teaches comprising the act of enabling an Ethernet interface to receive the request for OS information (column 10 lines 44-64).

As per claim 18, Krantz and Ito teaches the method of claim 13, but Krantz further teaches comprising the act of initiating an out-of-band management communication session (column 11 lines 25-45)(column 10 lines 46-64).

As per claim 19, Krantz and Ito teaches the method of claim 13, but Krantz further teaches comprising the act of enabling a VCD to transmit the request for OS information to the OS (column 11 lines 35-51)(column 12 lines 57-60).

As per claim 20, Krantz and Ito teaches the method of claim 13, but Krantz further teaches wherein the recited acts are performed in the recited order (column 10 lines 44-64)(column 11 lines 25-51)(column 12 lines 57-60).

Claims 3,5-7,15-16,21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krantz et al. U.S. Patent # 5,790,895 (hereinafter Krantz) Ito et al. U.S. Patent # 6,963,817 (hereinafter Ito) further in view of Vachon et al. U.S. Patent Publication # 2002/0078404 (hereinafter Vachon)

As per claim 3, Krantz and Ito teaches the remote server management controller of claim 1, but fails to teach wherein the specific communication interface is a USB host controller of the managed server. Vachon teaches the specific communication interface is a USB host controller of the manager server. (Paragraph 26). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Vachon's invention in Krantz and Ito's invention to come up with specific communication

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interface as USB host controller. The motivation for doing so would have been because USB interface supports variety of peripheral devices using the USB host controller.

(Paragraph 26)

As per claim 5, Krantz and Ito teaches the remote server management controller of claim 1, wherein data received from the user over the external communication interface is transmitted to the OS of the managed server but fails to teach via a USB interface. Vachon teaches using USB interface to transmit data to the server (Paragraph 26). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Vachon's invention in Krantz and Ito's invention to come up with using USB interface to transmit data to the server. The motivation for doing so would have been because USB interface supports variety of peripheral devices using the USB host controller.

As per claim 6, Krantz and Ito teaches the remote server management controller of claim 1, but fails to teach the specific communication interface is a 1394 interface of the managed server. Vachon teaches the specific communication interface is 1394 interface (Paragraph 27). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Vachon's invention in Krantz and Ito's invention to come up specific communication interface as 1394 interface. The motivation for doing so would have been to because it provides faster data transmission compare to other communication interfaces.

As per claim 7, Krantz and Ito teaches the remote server management controller of claim 1, wherein data received from the user over the external communication

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interface is transmitted to the OS of the managed server but fails to teach via a 1394 interface. Vachon teaches the transmitting data to the server using 1394 interface (Paragraph 27). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Vachon's invention in Krantz and Ito's invention to come up with using 1394 interface to transmit data to the server. The motivation for doing so would have been because it provides faster data transmission compare to other communication interfaces.

As per claim 15, Krantz and Ito teaches the method of claim 13 but fails to teach wherein the specific communication interface is a USB interface. Vachon teaches the specific communication interface is a USB interface (Paragraph 26). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Vachon's invention in Krantz and Ito's invention to come up with using USB interface. The motivation for doing so would have been because USB interface supports variety of peripheral devices using the USB host controller.

As per claim 16, Krantz and Ito teaches the method of claim 13 but fails to teach wherein the specific communication interface is a 1394 interface. Vachon teaches the specific communication interface is 1394 interface (Paragraph 27). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Vachon's invention in Krantz and Ito's invention to come up specific communication interface as 1394 interface. The motivation for doing so would have been to because it provides faster data transmission compare to other communication interfaces.

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As per claim 21, Krontz and Ito teaches the remote server management controller of claim 1, but fails to teach pre-defined communication interface comprises a USB interface. Vachon teaches pre-defined communication interface comprises a USB interface (Paragraph 26). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Vachon's invention in Krontz and Ito's invention to come up with using USB interface. The motivation for doing so would have been because USB interface supports variety of peripheral devices using the USB host controller and also one does not have to reconfigure the USB interface when using from one operating system to another.

As per claim 22, Krontz and Ito teaches the remote server management controller of claim 9, but fails to teach pre-defined communication interface comprises a USB interface. Vachon teaches standard communication interface comprises a USB interface (Paragraph 26). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Vachon's invention in Krontz and Ito's invention to come up with using USB interface. The motivation for doing so would have been because USB interface supports variety of peripheral devices using the USB host controller and also one does not have to reconfigure the USB interface when using from one operating system to another.

As per claim 23, Krontz and Ito teaches the method of claim 13, but fails to teach pre-defined communication interface comprises a comprises a USB interface. Vachon teaches standard communication interface comprises a USB interface (Paragraph 26). It would have been obvious to one of ordinary skill in the art at the time of applicant's

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invention to implement Vachon's invention in Krantz and Ito's invention to come up with using USB interface. The motivation for doing so would have been because USB interface supports variety of peripheral devices using the USB host controller and also one does not have to reconfigure the USB interface when using from one operating system to another.

(10) Response to Argument

Appellant's argument:

Appellant states recited limitation "without arbitration" is a negative limitation and as such does not require literal basis in the specification and Claims 1,9,13 are rejected under 35 U.S.C 112 first paragraph, as failing to comply with the written description requirement should be traversed.

Examiner's Response:

Examiner respectfully disagrees with the appellant because in claim 1,9,13, it states “..**to redirect without arbitration** the data received from the OS to the remote user”. Nowhere in the specification does it state “to redirect without arbitration”.

Therefore the claim language is not supported by the specification. Specifically, Examiner would like to direct appellant attention to the MPEP which states:

“Any negative limitation or exclusionary proviso must have basis in the original disclosure. If alternative elements are positively recited in the specification, they may be explicitly excluded in the claims. See *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977) (“[the] specification, having described the whole, necessarily described the part remaining.”). See also *Ex parte Grasselli*, 231 USPQ 393 (Bd. App.

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1983), aff 'd mem., 738 F.2d 453 (Fed. Cir. 1984). The mere absence of a positive recitation is not basis for an exclusion. Any claim containing a negative limitation which does not have basis in the original disclosure should be rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Note that a lack of literal basis in the specification for a negative limitation may not be sufficient to establish a prima facie case for lack of descriptive support. Ex parte Parks, 30 USPQ2d 1234, 1236 (Bd. Pat. App. & Inter. 1993). See MPEP § 2163 - § 2163.07(b) for a discussion of the written description requirement of 35 U.S.C. 112, first paragraph."

Therefore, MPEP clearly states "Any claim containing a negative limitation which does not have basis in the original disclosure should be rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement". Therefore claim language states "without arbitration" which is a negative limitation which does not have basis in the original disclosure, therefore it is rejected under 35 USC 112 first paragraph. Examiner would also like to point out that, Appellant admits that the specification does not literally contain the claim recitation "without arbitration".

Appellant Argument:

Appellant states Vachon fails to describe "transmission of data corresponding to the data received from the external communication interface to an operating system of a managed server".

Examiner's Response:

Examiner respectfully disagrees with the appellant because in Paragraph 36,38, Vachon teaches that serial bus interface invokes to read contents of the target computer

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(remote user). Serial bus interface (i.e. external communication interface) then sends the data to the host computer (i.e. managed server) over the serial bus to the host debugger of the host computer (operating system of the manager server) (Paragraph 36). Examiner would like to point out that debugger is kernel of the an operating system which means the data is send to the operating system. (shown below)

[0036] As shown at step 602, upon the occurrence of an internal fault condition on target computer 502, a user, such as a system administrator, initiates a physical memory snapshot, for instance, by entering a command, such as ".dump" to host debugger 512. At step 604, serial bus interface 508, which according to an aspect of the invention may include an IEEE 1394 controller card, invokes physical Direct Memory Access (DMA) to read the contents of target computer physical memory 510. Serial bus interface 508 then sends the data to the host computer 500 over serial bus 504. At step 606, host debugger 512 creates the crash dump file on host computer and stores the data received over serial bus 504 from the target computer's physical memory 512 in the crash dump file.

In paragraph 7, Vachon specifies that debugger is the kernel of an operating system. Therefore, Vachon teaches sending the data via serial bus interface the data received from the target computer to the host computer and the debugger run by the operating system. (shown below)

[0007] Referring to FIG. 3, techniques for remote debugging of the kernel of an operating system and application programs of a first computer, such as target computer 300, from a second computer, such as host computer 302 are known in the art. In such an environment, a hardware link 304 (e.g., RS-232C), such as a serial connection, is used to transmit debugging commands to and return debugging results from software undergoing test on target computer 300, via serial ports 306 and 308. A small portion of core operating system ("O.S.") 310, typically "pushes" data to host debugger 312, thus using processor time on target computer 300 and causing side effects on target computer

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In Paragraph 3, Vachon clearly states that a crash dump file is generated by the operating system of the computer. Therefore, the serial bus interface (i.e. external communication interface) sends the data to the host computer and to the debugger, which means the data is transmitted by the external communication interface to the operating system of the server (Paragraph 36,38). Therefore Vachon teaches the claimed limitations.

[0036] As shown at step 602, upon the occurrence of an internal fault condition on target computer 502, a user, such as a system administrator, initiates a physical memory snapshot, for instance, by entering a command, such as ".dump" to host debugger 512. At step 604, serial bus interface 508, which according to an aspect of the invention may include an IEEE 1394 controller card, invokes physical Direct Memory Access (DMA) to read the contents of target computer physical memory 510. Serial bus interface 508 then sends the data to the host computer 500 over serial bus 504. At step 606, host debugger 512 creates the crash dump file on host computer and stores the data received over serial bus 504 from the target computer's physical memory 512 in the crash dump file.

[0038] Referring to FIG. 7, steps are shown for remotely creating a physical memory snapshot to enable kernel debugging with minimal down time in accordance with various inventive principles. At step 700, a user, such as a system administrator, may issue a command through host debugger 512 to halt normal execution of core operating system 514 of target computer 502. Halting execution of core operating system 514 is sometimes referred to as "breaking into" target computer 502. At step 702, the user initiates a physical memory snapshot, for instance, by entering a command such as ".dump," which results in host computer 500 accessing the contents of physical memory

Appellant's Argument:

Appellant states Ito does not teach VCD interface being adapted to intercept data intended for a specific communication interface and redirect without arbitration the data received from the OS to the remote user via the external communication interface.

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Examiner's Response:

First of all Examiner would like to point out that the claim language "redirecting without arbitration" is not supported by the specification of the current application. Furthermore, column 11 lines 61-67, column 12 lines 1-3, 6-12, lines 25-32, Ito teaches the microprocessor of the intercepts the signal (i.e. data), and depending on the mode of the operating system, the microprocessor forwards the reading to the UART which in turn the data is channeled to the RS232C to the remote user via wireless modem through Ethernet interface (external interface). Examiner would like to point out that in column 12 lines 25-32, Ito teaches that operating system dictate that the data be channeled to the UART which in turn will channel the signal to the wireless modem and the modem will transmit the signal/data to the remote computer via the modem. This means the data is intercepted and forward the data to the remote user. Examiner would like to point out that appellant argues that this is done based on the mode of the operating system. Examiner would like to point out that the scenario of that mode of the operating system can always be towards the remote computer, which means that Ito teaches the claimed limitation. Examiner would also like to point out, Appellant also admits that the data is sent to the location as directed by the OS which means the data is intercepted. Examiner would also like to point out that the data is redirected without arbitration since there is no arbitrator present in Ito reference. Therefore Ito teaches the claimed limitation.

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FIG. 7 is a flow chart of the digital signal processing of the present invention. Thus, the signal from the smart device 300 is received 302 at the RS-485 device 76 which in turn is transmitted to the UART 304. The UART will condition 55 the signal to be accepted by the microprocessor 306. Depending on the mode of operation of the operating

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system, the microprocessor 306 may then forward the reading to the UART 74 in the step 308 which in turn is sent 310 to the RS-232C 72. The RS 232C 72 allows for a local dump

Alternatively, the mode of operation may dictate that the data be channeled to the UART 314 which in turn will channel the signal to the wireless modem 91, as shown in sequence step 316. The modem will transmit the signal to a 10 remote computer as seen in step 318. From the remote computer, the data may be disseminated via various means such as previously noted with reference to FIGS. 4 and 5.

25 Alternatively, the mode of the operating system may dictate that the data be channeled to the UART 330 which in turn will channel the signal to the wireless modem 91, as shown in sequence step 332. The modem will transmit the signal to a remote computer as seen in step 334. From the 30 remote computer, the data may be disseminated via various means such as previously noted with reference to FIGS. 4 and 5.

Appellant's Argument:

Appellant states Vachon does not teach "receiving a request for OS information from a remote user... and receiving data responsive to the act of transmitting the request to the OS. Appellant also states Ito fails to teach redirect without arbitration the formatted data to the external communication.

Examiner's Response:

Examiner respectfully disagrees with the applicant because in Paragraph 36, sending a command (i.e. request) by the user/administrator to the host debugger to read the contents of the target computer (receiving the request for OS information). The serial interface directs the DMA to read the content of the remote computer and serial bus interface sends the data to the host computer via the serial bus (receiving data from

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the act of transmitting the request). The host debugger stores the data received over the serial bus. Vachon does not explicitly teach formatting the responsive data for transmission and; redirecting without arbitration the formatted data to the external communication interface.

Furthermore, column 11 lines 61-67, column 12 lines 1-3, 6-12, lines 25-32, Ito teaches the microprocessor of the transmitting the signal (i.e. data), and depending on the mode of the operating system, the microprocessor forwards the reading to the UART which in turn the data is channeled to the RS232C to the remote user via wireless modem through Ethernet interface (external interface). Examiner would like to point out that in column 12 lines 25-32, Ito teaches that operating system dictate that the data be channeled to the UART which in turn will channel the signal to the wireless modem and the modem will transmit the signal/data to the remote computer via the modem. This means the data is transmitted to the remote user. Examiner would like to point out that appellant argues that this is done based on the mode of the operating system. Examiner would like to point out that the scenario of that mode of the operating system can always be towards the remote computer, which means that Ito teaches the claimed limitation. Examiner would also like to point out, Appellant also admits that the data is sent to the location as directed by the OS which means the data is intercepted. Therefore Ito teaches the claimed limitation.

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Vachon's teaching to come up with redirecting data to the remote user through modem instead of redirecting

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data to specific communication interface (i.e. UART). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45)

Second Rejection which is 103 (a) rejection as being unpatentable over USPN 5,790,895 (Krontz) in view of USPN 6,963,817 (Ito)

Appellant's Argument:

Appellant states Krontz does not teach "redirection of data without arbitration from the OS to the remote user". Appellant also states Ito fails to teach or suggest "redirecting without arbitration the data received from the OS to the remote user and redirection without arbitration the formatted data to the external communication interface".

Examiner's Response:

First of all Examiner would like to point out that "redirection of data without arbitration from the OS to the remote user" is not supported by the specification of the current application. Appellant argue that since "redirect without arbitration" is a negative does not require literal basis in the specification. Examiner would like to refer to first examiner's response stated above.

Examiner would also like to point out the Krontz teaches the claimed invention of claim 1,9,13 "redirect data the data received from the OS to the remote user", therefore appellant amended the claim language to include "redirect data without arbitration the data received from the OS to the remote user" to overcome the Krontz reference. But

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the specification of the current application does not support “redirection without arbitration”.

Examiner agrees Krontz does not explicitly show to redirect without arbitration the data received from the OS to the remote user via the external communication interface instead of redirecting the data received from the OS to the specific communication interface.

Ito teaches a virtual communication device (VCD) (microprocessor) interface adapted to: intercept data received from the OS (column 12 lines 25-28), the VCD interface comprising a pre-defined standard communication interface, the data received from the OS being intended for specific communication interface (column 12 lines 62-67, lines 1-5), and to redirect **without arbitration** the data received from the OS to the remote user via the external communication interface instead of redirecting the data received from the OS to the specific communication interface (column 12 lines 6-12, lines 25-32)(Fig. 7)(Fig. 8)

Ito teaches microprocessor intercepts the signal (i.e. data) from the operating system, and forwards the reading to the UART which in turn the data is channeled to the RS232C to the remote user via wireless modem through Ethernet interface (external interface). In column 9 lines 41-47, Ito teaches operating system receiving the data which are then forwarded to the remote user through the UART to microprocessor and to wireless modem and through Ethernet interface to the remote computer. Therefore it means that data is sent to the UART interface in the first place (which can be interpreted as data intended for specific communication interface) which is then

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forwarded to the wireless modem and to the remote user. Examiner would like to point out that in column 12 lines 25-32, Ito teaches that operating system dictate that the data be channeled to the UART which in turn will channel the signal to the wireless modem and the modem will transmit the signal/data to the remote computer via the modem. This means the data is intercepted and forward the data to the remote user. Examiner would like to point out that appellant argues that this is done based on the mode of the operating system. Examiner would like to point out that the scenario of that mode of the operating system can always be towards the remote computer, which means that Ito teaches the claimed limitation. Examiner would also like to point out, Appellant also admits that the data is sent to the location as directed by the OS which means the data is intercepted. Examiner would also like to point out that the data is redirected without arbitration since there is no arbitrator present in Ito reference.

Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Ito's teaching in Krantz's teaching to come up with redirecting data to the remote user through modem and UART2 (external communication) instead of redirecting data to specific communication interface (i.e. UART3). The motivation for doing so would be so that the data can be stored remotely to have a back-up system and also security reasons (column 11 lines 43-45). Furthermore the combination of the Krantz and Ito is proper based on same embodiment methodology states in the specification of the current application.

(11) Related Proceeding(s) Appendix

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No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Dhairya A Patel/

Examiner, Art Unit 2451

May 20, 2009

/John Follansbee/

Supervisory Patent Examiner, Art Unit 2451

Conferees:

/William C. Vaughn, Jr./

Supervisory Patent Examiner, Art Unit 2444

/John Follansbee/

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